

REMARKS

Claims 1–24 are pending in the instant application. Claims 5, 6, 8-10, 13, 16, 17, 19-21, and 24 are rejected while claims 1-4, 14 and 15 are allowed. Applicants cordially thank the Examiner for allowed claims 1-4, 14, and 15, as well as the subjected matter indicated as allowable, i.e., claims 7, 11, 12, 18, 22, and 23, but for their dependence upon rejected base claims. Claims 8 and 21 have been canceled, while claims 5, 9-11, 13, 14, 16, 18-20, 22, and 24 have been amended leaving claims 1-7, 9-20, and 22-24 for consideration upon entry of this amendment. No new matter has been added.

Drawings

The drawings stand objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 46 in Fig. 2, 64 in Fig. 4, 67 and 70 in Fig. 5, 156 and 158 in Fig. 6. It is respectfully pointed out that reference characters 67 and 70 in Figure 5 are identified in the specification in paragraphs [0022] and [0023], respectively, as originally filed. A proposed drawing correction is submitted in reply in reply to the Office action with respect to all remaining drawing objections canceling the reference characters in the respective Figures, i.e., Figures 2, 4, and 6.

The drawings also stand objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “64” has been used to designate both the window in Fig. 3 and the end of bearing retainer 78 in Fig. 4. Corrected drawings are submitted in reply to the Office action which cancels reference character “64” in Fig. 4.

Accordingly, it is respectfully requested that the objections to the drawings be withdrawn.

Specification and Claim Objections

The disclosure and claims 7, 11, 14, 18, 19, 21, and 22 are objected to because of the enumerated informalities on pages 2-4 of the Detailed Action. Applicants have amended the specification in accordance with the suggestions from the Examiner in the Detailed Action. Thus, it is respectfully requested that the objection to the specification be withdrawn.

Claim Rejections -35 USC § 112

Claims 9, 13, 20, and 24 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that claims 9, 13, 20, and 24 contain the trademark/trade name INCOLOY 909 and that where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). It is respectfully noted that claims 9, 13, 20, and 24 have been amended to delete any reference to a trade name and substitute -- nickel-cobalt-iron alloy-- as a generic substitute, as is well known in the art. Thus, it is respectfully requested that the rejections to claims 9, 13, 20, and 24 be withdrawn.

Claim Rejections -35 USC § 102

Claims 5 and 6 stand rejected under 35 U.S.C. §102(b) as being anticipated by Ganin *et al.* (U.S. Patent No. 5,838,762) and separately by Eggelsmann (U.S. Patent No. 4,115,718). Applicants respectfully traverse.

Claim 5 has been amended to include the limitation -- the rotor hub having a coefficient of thermal expansion which matches a higher coefficient of thermal expansion of the rotor to a lower coefficient of thermal expansion of the shaft -- which the Examiner provides as the reason for allowance with respect to claim 1 on page 13 of the Detailed Action. Thus, it is respectfully submitted that claims 5, including claim 6 depending therefrom, define over Ganin *et al.* and Eggelsmann.

Claim Rejections -35 USC § 103

Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ganin *et al.* (U.S. Patent No. 5,838,762) as applied to claim 5 above, and further in view of Caraher *et al.* (U.S. Patent No. 4,866,748). Applicants respectfully traverse.

It is respectfully pointed out that claim 8 depends from claim 5 which is submitted as being allowable for defining over Ganin *et al.* as discussed above. Furthermore, it is respectfully

noted that use of the teaching of matching the coefficients of thermal expansion between the rotor and the shaft allegedly taught by Caraher *et al.* does not cure the deficiencies noted above with respect to Ganin *et al.*

Moreover it respectfully submitted that Caraher *et al.* teaches away from Applicants invention by disclosing that “a **welded joint** to the annular plug 46 which has an outer marginal portion fixedly attached to the rotor skirt 50. Also, the bushing 54 is made of a material having thermal expansion properties closely matched to the material of stem component 56, whereas the plug 46 is made of a material having thermal expansion properties more closely related to the material of rotor skirt 50 than to the material of bushing 54. As a result, the maximum thermal stresses occur at the relatively stronger **welded joint** between the plug 56 and the bushing 54 rather than at the brazed joint between the bushing 54 and the stem component 56.” (Emphasis added). Col. 8, lines 25-33.

Claims 6 and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Eggelsmann (U.S. Patent No. 4,115,718) as applied to claim 5 above, and further in view of Ganin *et al.* (U.S. Patent No. 5,838,762) and Caraher *et al.* (U. S. Patent No. 4,866,748). Applicants respectfully traverse for at least the reasons discussed above.

Claim 10 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Eggelsmann (U.S. Patent No. 4,115,718) in view of Leguen *et al.* (U. S. Patent No. 4,734,927) and Ganin *et al.* (U. S. Patent No. 5,838,762). Applicants respectfully traverse.

Claim 10 has been amended to include the limitation -- the shrink fit means having a coefficient of thermal expansion which matches a higher coefficient of thermal expansion of the rotor body assembly to a lower coefficient of thermal expansion of the target/bearing assembly -- which the Examiner provides as the reason for allowance with respect to claim 1 on page 13 of the Detailed Action. Thus, it is respectfully submitted that claims 10, including claims depending therefrom, i.e., claims 11-13, define over Ganin *et al.* and Eggelsmann.

Claims 16, 17, 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Eggelsmann (U.S. Patent No. 4,115,718) in view of Ganin *et al.* (U.S. Patent No. 5,838,762). Applicants respectfully traverse.

Claim 16 has been amended to include the limitation -- said rotor hub having a coefficient of thermal expansion which matches a higher coefficient of thermal expansion of said rotor means to a lower coefficient of thermal expansion of said axial projection --which the

Examiner provides as the reason for allowance with respect to claim 1 on page 13 of the Detailed Action. Thus, it is respectfully submitted that claims 16, including claims depending therefrom, i.e., claims 17-20, define over Ganin *et al.* and Eggelsmann. Claim 21 has been canceled rendering any rejection thereto moot.

Claim 19 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Eggelsmann (U.S. Patent No. 4,115,718) and Ganin *et al.* (U.S. Patent No. 5,838,762) as applied to claim 16 above, and further in view of Caraher *et al.* (U. S. Patent No. 4,866,748). Applicants respectfully traverse.

It is respectfully pointed out that claim 19 depends from claim 16 which is submitted as being allowable for defining over Ganin *et al.* as discussed above. Furthermore, it is respectfully noted that use of the teaching of matching the coefficients of thermal expansion between the rotor and the shaft allegedly taught by Caraher *et al.* does not cure the deficiencies noted above with respect to Ganin *et al.*

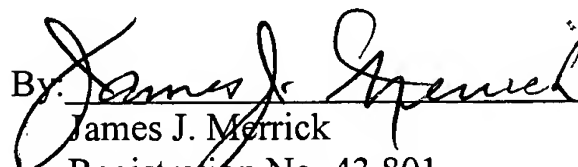
Moreover it respectfully submitted that Caraher *et al.* teaches away from Applicants invention by disclosing that “a **welded joint** to the annular plug 46 which has an outer marginal portion fixedly attached to the rotor skirt 50. Also, the bushing 54 is made of a material having thermal expansion properties closely matched to the material of stem component 56, whereas the plug 46 is made of a material having thermal expansion properties more closely related to the material of rotor skirt 50 than to the material of bushing 54. As a result, the maximum thermal stresses occur at the relatively stronger **welded joint** between the plug 56 and the bushing 54 rather than at the brazed joint between the bushing 54 and the stem component 56.” (Emphasis added). Col. 8, lines 25-33.

Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fees be charged to Deposit Account No. 07-0845 maintained by Applicants' Assignee.

Respectfully submitted,

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Date: November 25, 2003
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THE STAMP OF THE PATENT OFFICE, PLACED HEREON, ACKNOWLEDGES RECEIPT OF:

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